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0218857.1 14 August 2002 (14.08.2002) GB
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- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **DE DOMINICIS, Mattia** [IT/IT]; Reckitt Benckiser Italia, Piazza S. Nicolo 12/3, I-30034 Mira (IT). **RIGHETTO, Zefferino** [IT/IT]; Reckitt Benckiser Italia, Piazza S. Nicolo 12/3, I-30034 Mira (IT).
- (54) Title: **BACTERICIDE SURFACTANT COMPOSITIONS**
- (57) Abstract: A detergent comprising: a) 0.001 % to 40 % w/v of a bactericidally active water-insoluble cationic compound in its salt form wherein the counterion anion has at least one of the following properties: 1) can generate a water-insoluble salt form, by water-insoluble we mean that less than 10 % w/v dissolves in deionised water at 20 °C, preferably less than 1 % w/v; 2) has a MW of less than 300, (preferably less than 200) but greater than 50 (preferably greater than 75), 3) the dissociation constant (K<sub>d</sub>) of the salt is less than 10<sup>-3</sup>, preferably less than 10<sup>-6</sup>; b) 0.001 to 40 % w/v of an anionic surfactant; and c) up to 98 % w/v of water.
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declarations under Rule 4.17:**  
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations  
— of inventorship (Rule 4.17(iv)) for US only
- Published:**  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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## INTERNATIONAL SEARCH REPORT

Internat Application No  
PCT/GB 03/03447

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C11D1/65 C11D1/86 C11D3/48 //C11D1:14, C11D1:22,  
C11D1:72

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 553 141 A (KATSUMI MAMORU ET AL) 5 January 1971 (1971-01-05) column 2, line 8-35 column 3, line 17-24 examples 2,3	1-11
X	CH 919/66 A4 (REWO CHEMISCHE FABRIK GMBH) 29 January 1971 (1971-01-29) column 3, line 3 -column 4, line 14 example 2	1-11
X	GB 1 066 795 A (HOLLICHEM CORP) 26 April 1967 (1967-04-26)	1,5,8-10
A	page 2, line 9-42 examples 16,28	11
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

11 November 2003

Date of mailing of the international search report

25/11/2003

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

Internat Application No  
PCT/GB 03/03447

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 001 394 A (FOGEL ARNOLD W ET AL) 4 January 1977 (1977-01-04) column 1, line 58 -column 2, line 13 column 3, line 30-42	1,2,8-10

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-9, 11 (all partially)

Present claim 1 relates to an extremely large number of possible compounds. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds encompassed in the claims. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds as defined in claim 1 that meet the criteria (1) and (2). Criterion (2) has only been searched as far as it complies with alternative (1). Alternative (3) is unclear since the conditions under which the dissociation constant  $K_d$  is measured are not disclosed.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/03447

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-9, 11 (all partially)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/03447

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3553141	A	05-01-1971	DE 1617148 A1	18-02-1971
CH 91966	D	29-01-1971	DE 1264663 B	28-03-1968
			CA 785249 A	
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